

ABSTRACT

A means for determining the concentration of a hydrogen-rich fuel in a fuel solution within the anode reservoir of a fuel cell. The fuel concentration is determined using a dye mixture responsive to fuel concentration within a fuel solution. As fuel is consumed, the fuel concentration decreases. As the fuel concentration decreases, the dye changes color. The resulting color changes occur within the anode reservoir of the fuel cell, or within a dye chamber in fluid contact with the anode reservoir, and are made visible by a window. A color strip and fuel scale may be included to facilitate fuel concentration determination based on the color of the fuel solution. Additionally, a valve responsive to dye color may act to control fuel delivery.

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